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EXAMINER	
FOUD, HICHAM B	

ART UNIT	PAPER NUMBER
2419	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,660	STEPHENS, ADRIAN P.	
	Examiner	Art Unit	
	HICHAM B. FOUD	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,12-17,21-25,28-31,33 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,12-17,21-25,28-31 and 33-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/29/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/18/2008 has been entered.

Response to Amendment

2. The amendment filed on 04-21-2008 has been entered and considered.

Claims 1, 3-9, 12-17, 21-26, 28-31 and 33-34 are pending in this application.

Claims 2, 10-11, 18-20, 27 and 32 have been canceled.

Claims 1, 3-9, 12-17, 21-26, 28-31 and 33-34 remain rejected as discussed below.

Claim Objections

3. Claim 8 is objected to because of the following informalities:

Claim 8 depends on the cancelled claim 2.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 3-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For claim 1, the specification as originally filed does not adequately describe the feature of "sending a response to the client confirming scheduling of the request". More specifically, the claim calls for "scheduling of the request ". However, the specification as originally filed discloses the scheduling of the delivery of the information (see [0021] line 3). Thus, Examiner concludes that the claimed feature indicated above is a new matter and without further teachings, one skilled in the art does not know how to make and use the claimed invention without undue experimentation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 5, 7-9, 13-15, 17, 22-26, 28-31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecen in view of Angle and further in view of Benveniste (US 2005/0152324).

For claim 1, Pecen discloses a method for delivering information in a wireless network, the method comprising: receiving from a client, a request for delivery of the information (see Figure 2 box 204; wherein the user sends a request); creating a multicast in response to the request (see Figure 2 step 206; storing record of devices requesting multicast which means making a list of the devices participating in the multicast); sending a response to the client confirming scheduling of the request (see Figure 2 box 208 and paragraph 0024; wherein a signaling message is sent to clients to confirm the multicast which includes TMGI); and sending the information to the client according to a multicast (see Figure 2 box 212; wherein the base station of Figure 1 element 112 sends the multicast data). Pecen discloses all the subject matter with the exception of explicitly disclosing the scheduling of the multicast. However, Angle discloses a scheduler that schedules the multicast data based on the priority (see [0040] lines 1-5 and Fig. 2 element 215; Multicast scheduler). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the multicast scheduler as taught by the invention of Angle into the system of Pecen for the purpose of satisfying the priorities by having QOS and therefore increasing the flexibility and the efficiency of the system.

Pecen in view of Angle discloses all the subject matter with the exception of configuring a power saving protocol to accommodate a scheduled delivery of the information. However, Benveniste discloses a method that schedules the delivery of the packets according to a power saving protocol to accommodate a scheduled delivery of the information by the use of APSD (automatic power saving delivery) (see [0008] lines

11-14; [0032] lines 1-8; [0038] lines 1-4). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the method of delivering packets as taught by the invention of Benveniste into the invention of Pecen in view of Angle to increase battery life of the wireless devices.

For claim 3, Pecen discloses a method further comprising: determining whether a previous multicast schedule created in response to a previous request from another client exists for the request (see Figure 2 box 206; wherein storing record of mobile device requesting multicast; inherently, there is no multicast schedule exists for the request); and if not, creating the multicast schedule (see Figure 2 box 204).

For claim 5, Pecen discloses a method further comprising: deleting the multicast schedule after all clients associated with the multicast schedule have been sent the information (see Figure 2 box "stop" the end of the cycle; inherently, the multicast schedule was deleted after sending the multicast media).

For claims 7 and 15, Benveniste discloses a method in wlan (see Figure 1 and paragraph 0028) and wherein a request comprises a transmission specification (TSPEC) request (see paragraph 0032; station submits a TSPEC request). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the request as taught by the invention of Benveniste for the purpose of the AP (access point) to know in advance the estimate of the data traffic and associated requirement.

For claim 8, Pecen discloses a method wherein the response comprises a TSPEC response (see Figure 2 box 10 and paragraph 0026; wherein the clients that requested the multicast configures itself to receive the multicast data in response to

signaling message; inherently the signaling message comprises of traffic specification (TSPEC)).

For claims 9, 24 and 31, Pecen discloses a method of receiving information in a wireless network, the method comprising: sending a request for delivery of the information the request including a multicast designation address (See Figure 2 box 204;request for multicast); receiving a response confirming the multicast delivery of the information (see Figure 2 box 208 and paragraph 0024; wherein a signaling message is sent to clients to confirm the scheduling which includes TMGI) created in response to the request for the delivery of the information (see Figure 2 step 206; storing record of devices requesting multicast which means making a list of the devices participating in the multicast) and receiving the information according to the multicast delivery (see Figure 2 box 212; wherein the base station of Figure 1 element 112 sends the multicast data). Pecen discloses all the subject matter with the exception of explicitly disclosing the scheduling of the multicast. However, Angle discloses a scheduler that schedules the multicast data based on the priority (see Fig. 2 element 215; Multicast scheduler). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the multicast scheduler as taught by the invention of Angle into the system of Pecen for the purpose of satisfying the priorities and having QOS.

Pecen in view of Angle discloses all the subject matter with the exception of configuring a power saving protocol to accommodate a scheduled delivery of the information. However, Benveniste discloses a method that schedules the delivery of the packets according to a power saving protocol to accommodate a scheduled delivery of

the information by the use of APSD (automatic power saving delivery) (see [0008] lines 11-14; [0032] lines 1-8; [0038] lines 1-4). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the method of delivering packets as taught by the invention of Benveniste into the invention of Pecen in view of Angle to increase battery life of the wireless devices.

For claims 13, 26 and 34, Benveniste discloses a method wherein the wireless network comprises a wireless local area network (WLAN) (see Figure 1 which uses WLAN).

For claim 14, Pecen in view of Angle and further in view of Benveniste do not explicitly mention the use of OFDM. However, an official notice is taken in that OFDM can be used since OFDM is a digital multi-carrier modulation scheme. Thus, it would have been obvious to the one skill in the art at the time of the invention to use OFDM as a modulation scheme for the purpose of increasing the adaptation to severe channel conditions without complex equalization.

Claim 17 is rejected for same reasons as claim 9 since claim 17 is the system that performs the method of claim 9. Furthermore, Benveniste discloses an apparatus further comprising: a radio frequency (RF) interface coupled to the processing circuit (See figure 1 element 12; access point which requires the use of RF interface coupled to the processing circuit).

For claim 22, Pecen discloses an apparatus wherein the apparatus comprises a wireless user station (STA) (see Figure 1 elements 114) and a network adaptor (See Figure 2 element 210).

For claim 23, Benveniste discloses an apparatus further comprising at least two antennas coupled to the RF interface (See Figure 1 elements 12; wherein the AP communicates with stations using at least 3 antennas as shown by the figure).

For claim 25, Benveniste discloses an apparatus further comprising: a radio frequency (RF) interface coupled to the processing circuit (See figure 1 element 12; access point which requires the use of RF interface coupled to the processing circuit).

For claim 28, Pecen discloses an apparatus wherein the processing circuit is to send the schedule to one or more requesting network devices as a transmission specification (TSPEC) response (see Figure 2 box 10 and paragraph 0026; wherein the clients that requested the multicast configures itself to receive the multicast data in response to signaling message; inherently the signaling message comprises of traffic specification (TSPEC)).

For claim 29, Pecen discloses an apparatus wherein the processing circuit is further to buffer application data packets for the wireless multicast until a time indicated on the schedule (see Figure 2 Block 212; ending the multicast media and the last block "stop"; inherently, at the end of the schedule of delivering the multicast which can be based on time of the schedule).

For claim 30, Benveniste further discloses the use of a plurality of antennas coupled to an RF interface (See Figure 1 elements 12; wherein the AP communicates with stations using at least 3 antennas as shown by the figure). Pecen in view of Angle and further in view of Benveniste discloses all the subject matter with the exception of explicitly disclosing wherein at least two antennas coupled to the RF interfaces for

enabling multiple input multiple output (MIMO). However, an official notice is taken in that the plurality of antennas can be used to implement MIMO transmission, since MIMO is the use of multiple antennas at both the transmitter and receiver to improve communication performance by taking advantage of higher spectral efficiency (more bits per second per hertz of bandwidth) and link reliability or diversity as opposite of SISO. Thus, it would have been obvious to the one skill in the art at the time of the invention to use the MIMO transmission as opposite of SISO for the purpose of increasing in data throughput and link range without additional bandwidth or transmit power.

6. Claims 4, 12 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecen in view of Angle and further in view of Benveniste and further in view of Pung et al (US 2002/0150099) hereinafter referred to as Pung.

For claims 4, 12 and 33, Pecen in view of Angle and further in view of Benveniste discloses all the subject matter with the exception of explicitly disclosing wherein the request includes a multicast address and a quality of service (QoS) identifier. However, Pung discloses a method in communication networks wherein the request includes a multicast address and a quality of service (QoS) identifier (see the fields of the request in Figure 4A; the multicast ID (MT-ID) and the QOS). Thus, it would have been obvious to the one skill in the art at time of the invention to use the request as taught by the invention of Pung into the invention of Pecen in view of Angle and further in view of Benveniste for the purpose of identification and satisfaction of quality of service constraints.

7. Claims 6, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecen in view of Angle and further in view of Benveniste and further in view of Chuah et al (US 7,096,039) hereinafter referred to as Chuah.

For claims 6, 16 and 21, Pecen in view of Angle and further in view of Benveniste discloses all the subject matter with the exception of wherein deleting the multicast schedule comprises receiving a deletion request from each client associated with the multicast schedule to delete the multicast schedule. However, Chuah discloses a method wherein each client needs to send a deletion message or a membership addition message to update the routing table and to know how many packets to be duplicated (see column 6 lines 23-27). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the method of updating the routing table by sending deletion messages as taught by the invention of Chuah into the invention of Pecen in view of Angle and further in view of Benveniste for the purpose of updating the routing table.

Response to Argument

9. Applicant's arguments with respect to claims 1, 3-9, 12-17, 21-26, 28-31 and 33-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as

well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hicham B. Foud whose telephone number is 571-270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hicham B Foud/
Examiner, Art Unit 2419
10/15/2008

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2619
10/24/08